

Figure 1

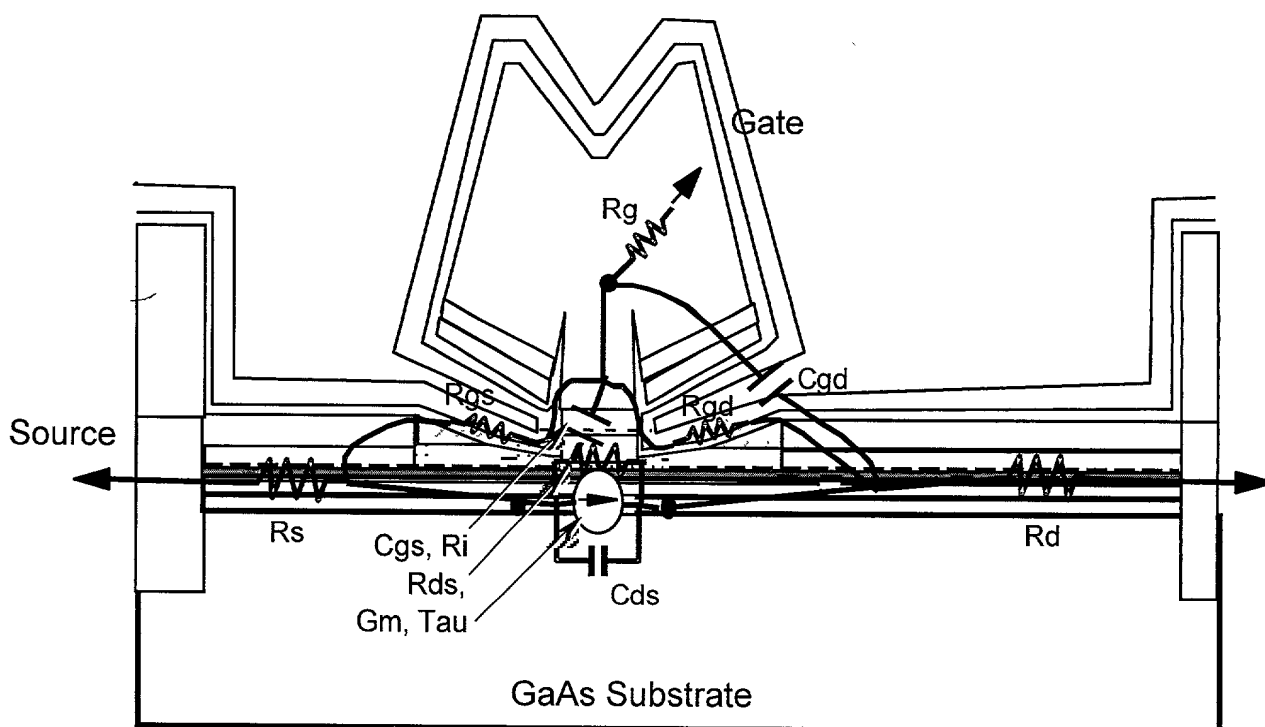


Figure 2

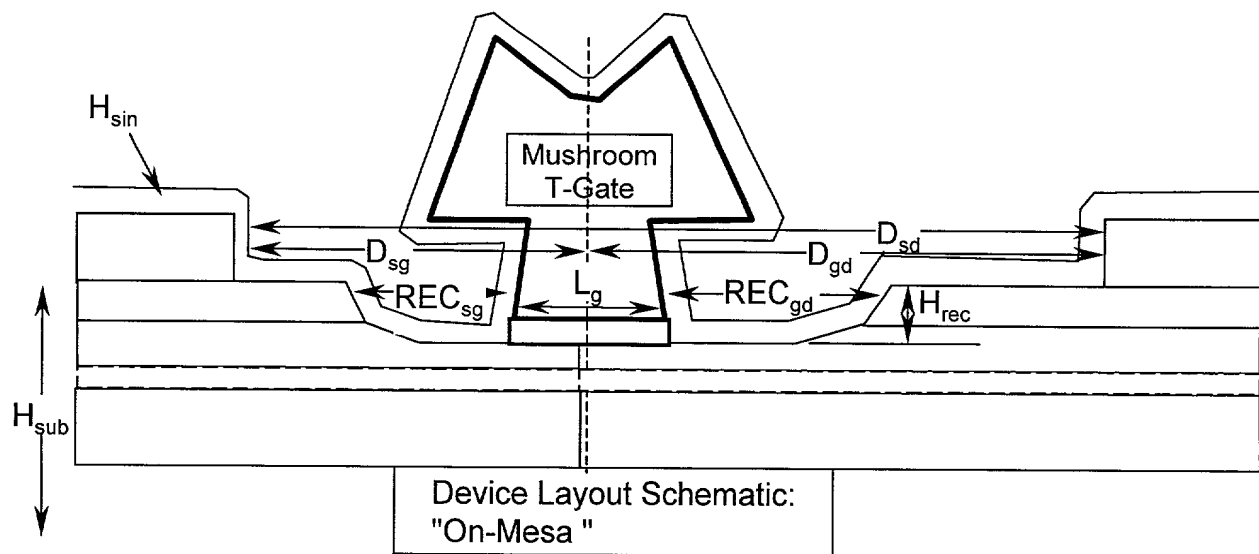


Figure 3

Single-Recess Geometry

Ohmic Contacts		Recess Geometry	
Separation / μm	wsd: 2	Width / μm	w: .52
Source width / μm	ws: 10	Position / μm	x: .8
Drain width / μm	wd: 10	Depth / μm	d: .77E-07
		Angle / degrees	a: 60
Schottky Contact		Inter-electrode Capacitances / fF	
Gate length / μm	Lg: .15	Cgsp	Cgdp
Gate position / μm	xg: .8	Cgsp: 0.6	Cgdp: 0.1
		Cdsp	Cdsp: 43
		<input type="checkbox"/> Auto	

OK Reset Cancel

Figure 4

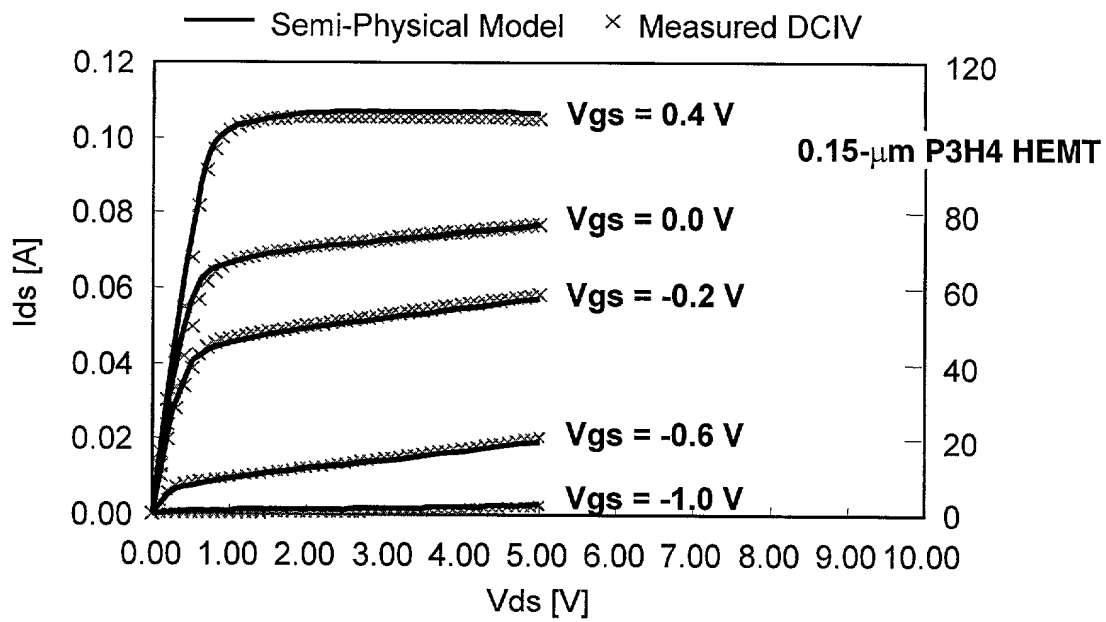


Figure 7

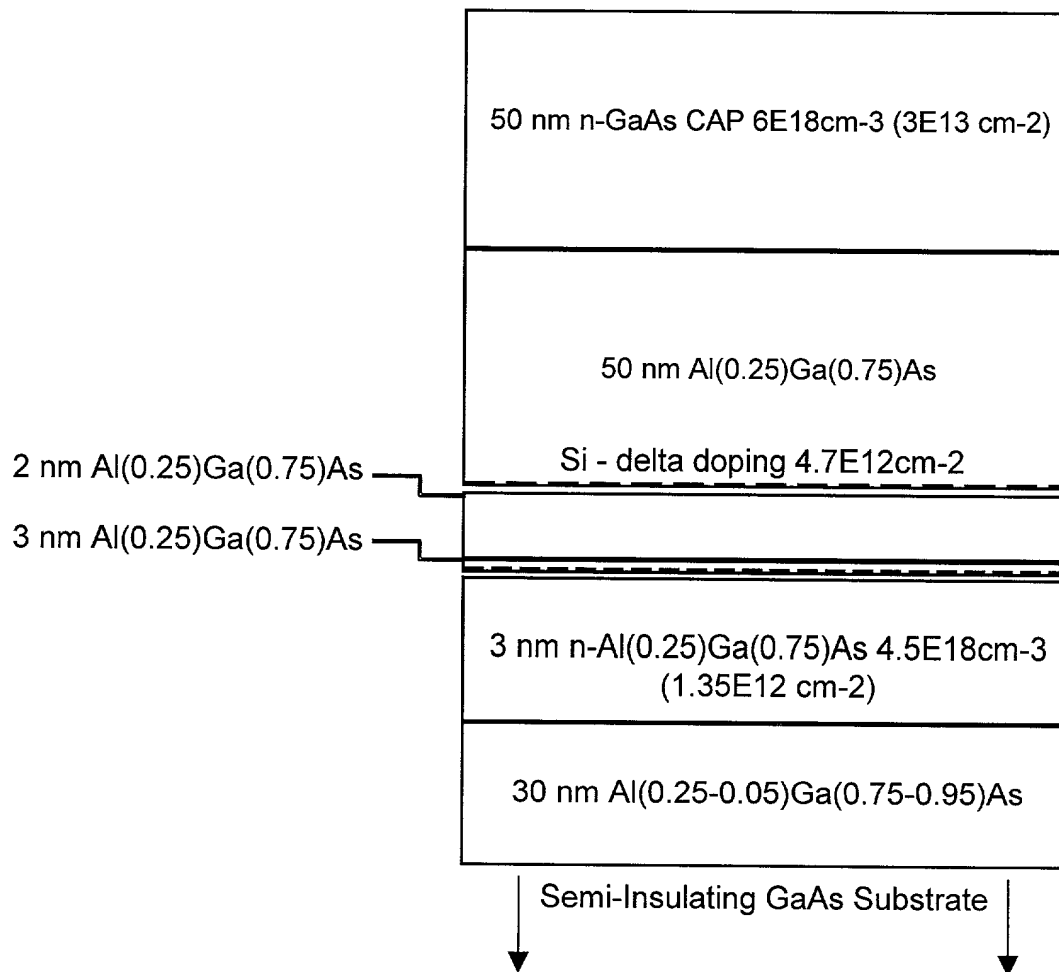


Figure 8

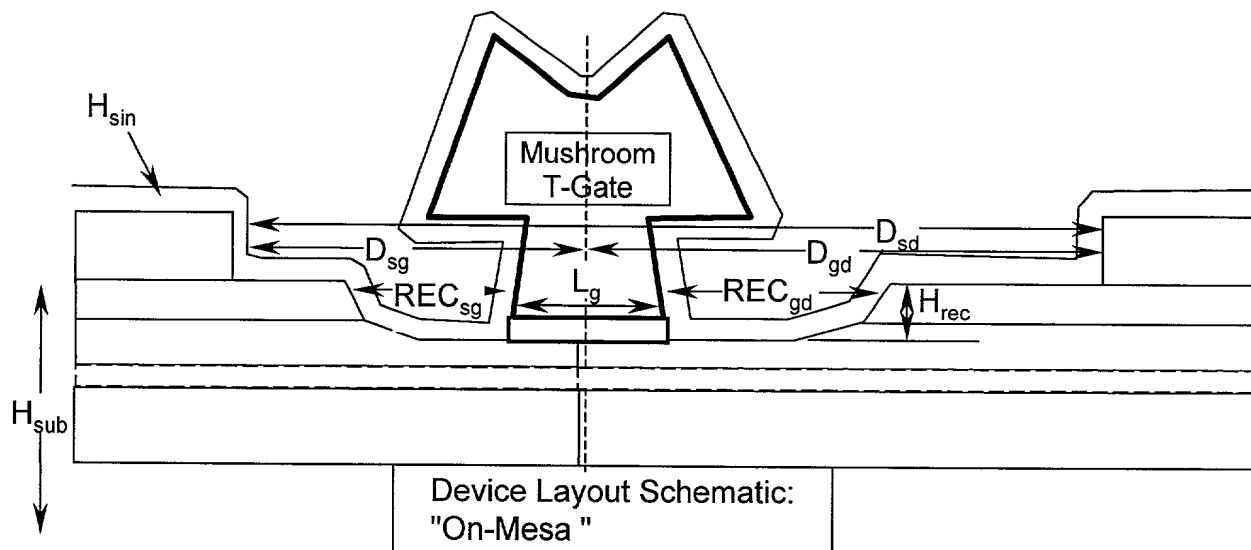


Figure 9

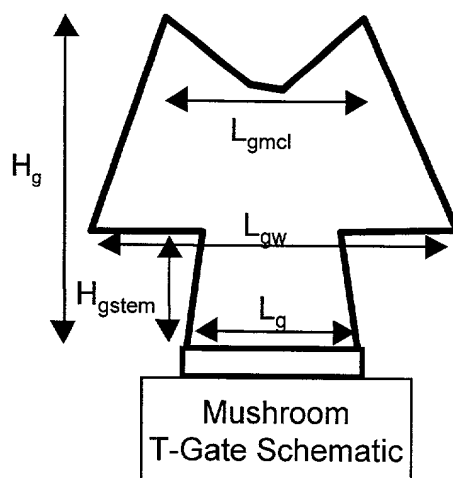


Figure 10

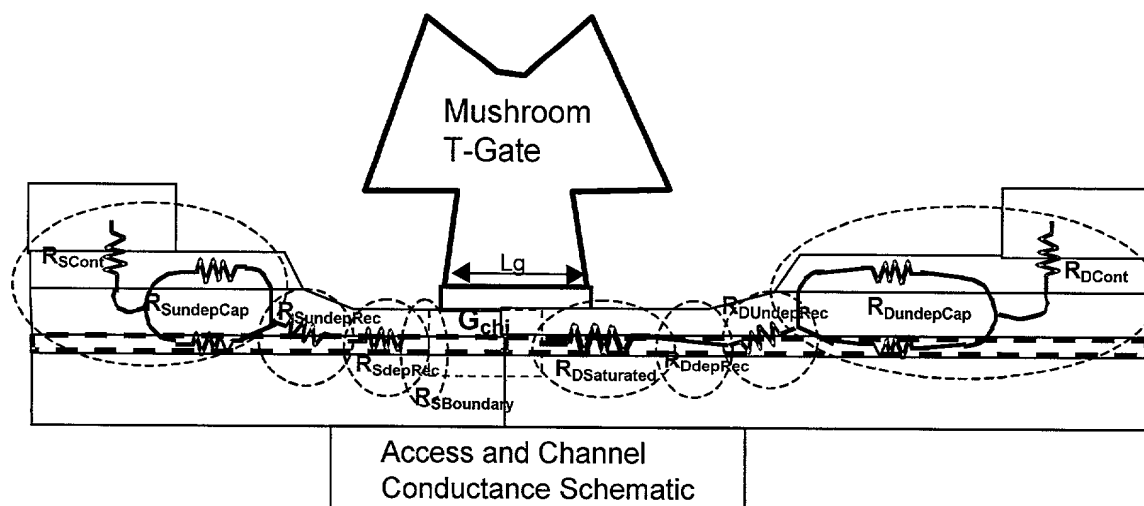
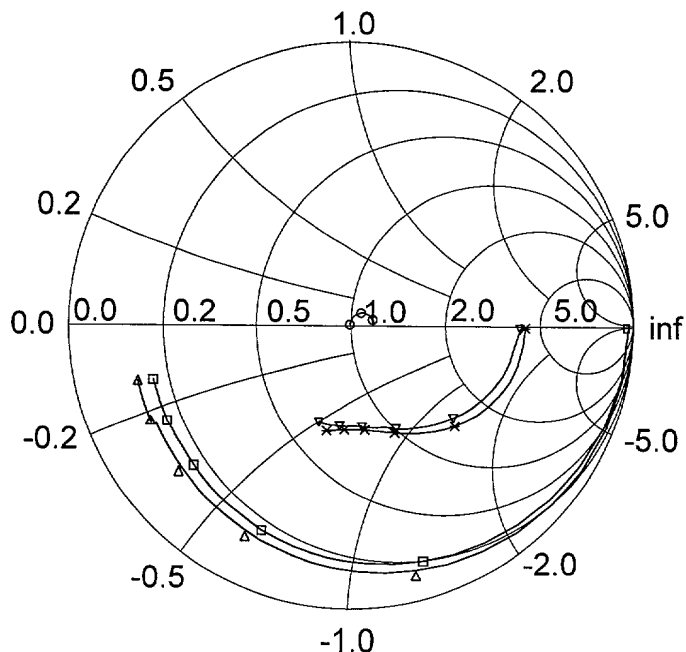


Figure 11

□ measure SMAT1 meas_4200AB_2vidpk-GTPA4 S[1,1]
 ○ measure SMAT1 meas_4200AB_2vidpk-GTPA4 S[1,2]
 ▽ measure SMAT1 meas_4200AB_2vidpk-GTPA4 S[2,2]
 △ Simulated SMAT1 cp100-semiphys S[1,1]
 ◇ Simulated SMAT1 cp100-semiphys S[1,2]
 ✕ Simulated SMAT1 cp100-semiphys S[2,2]



Frequency 0.05 to 40.05 GHz

Measured vs Modeled S-parameters
 Simulated Equivalent Circuit Element Values
 via Semi-Physical HEMT Model

Figure 12

0940300 00504850

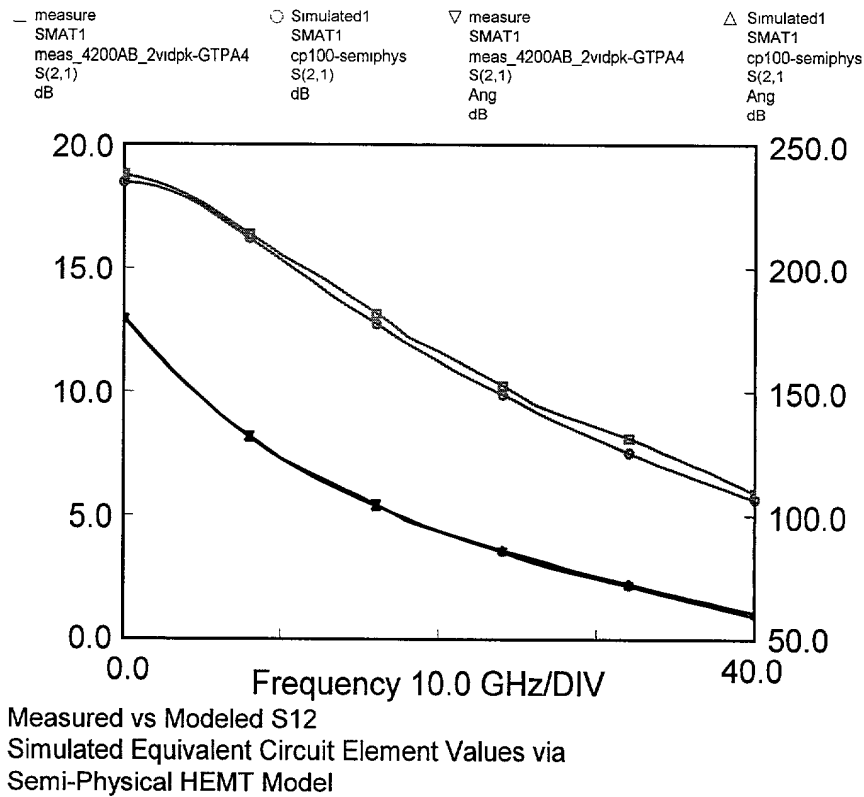


Figure 13

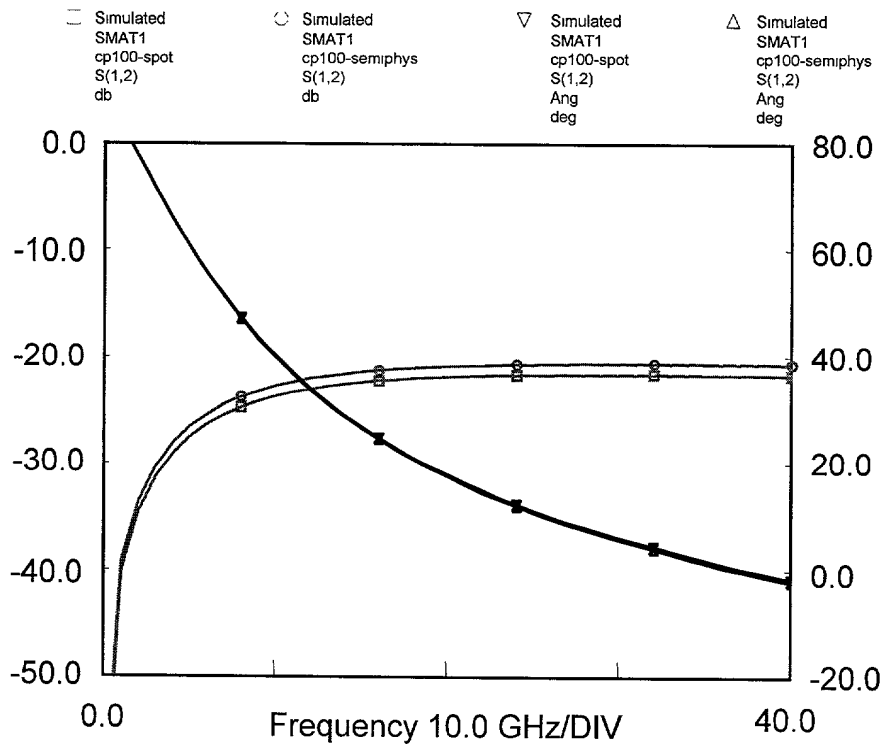


Figure 14

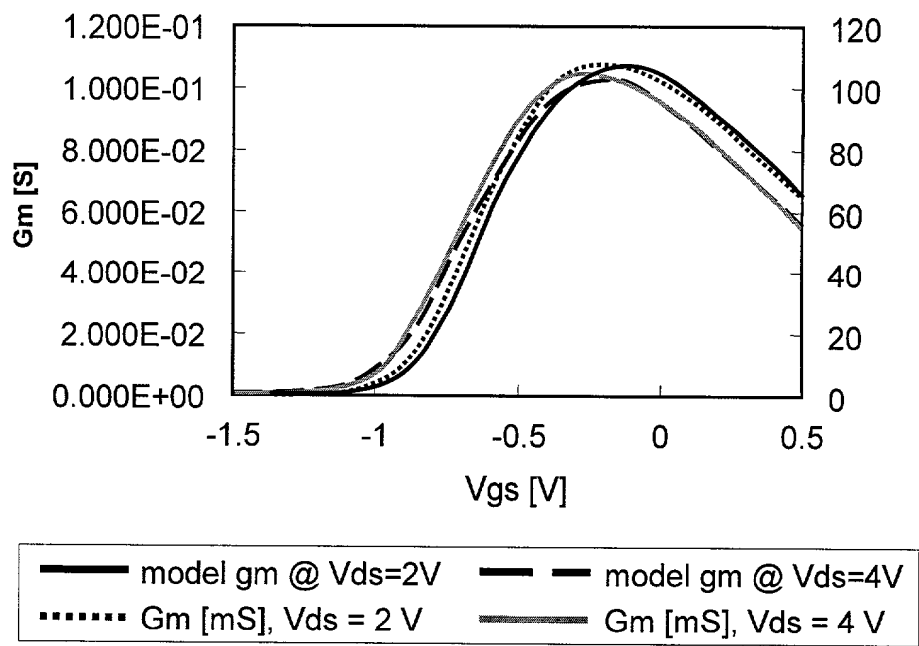


Figure 15

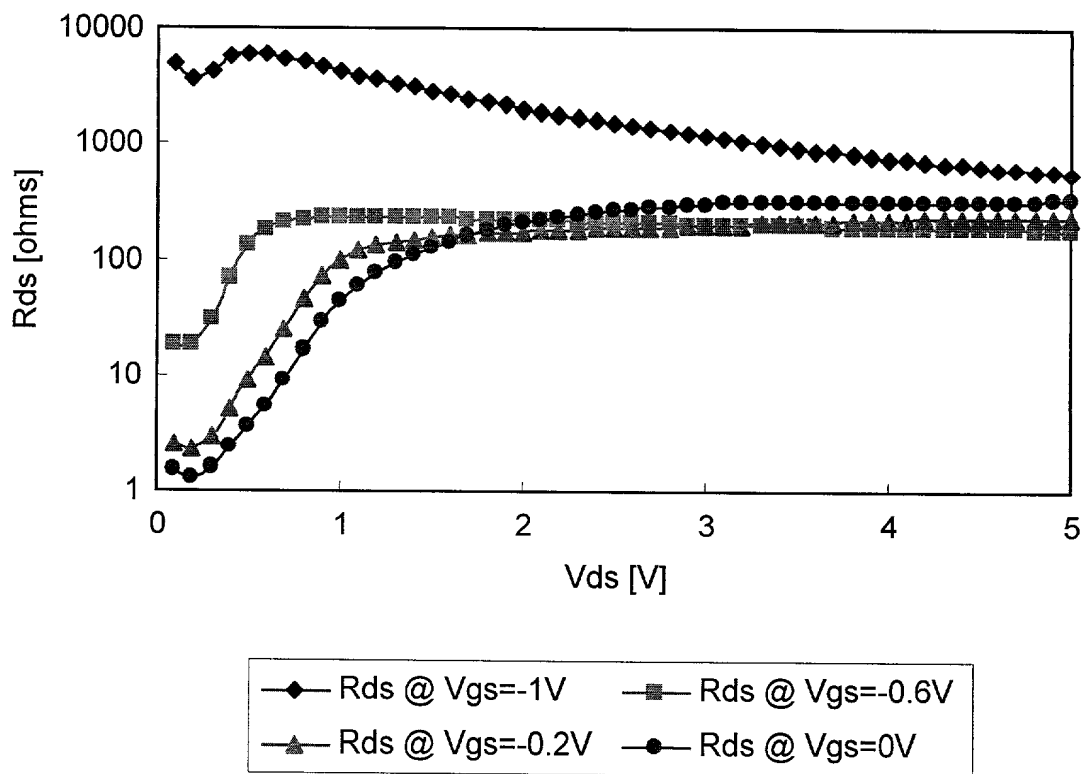


Figure 16

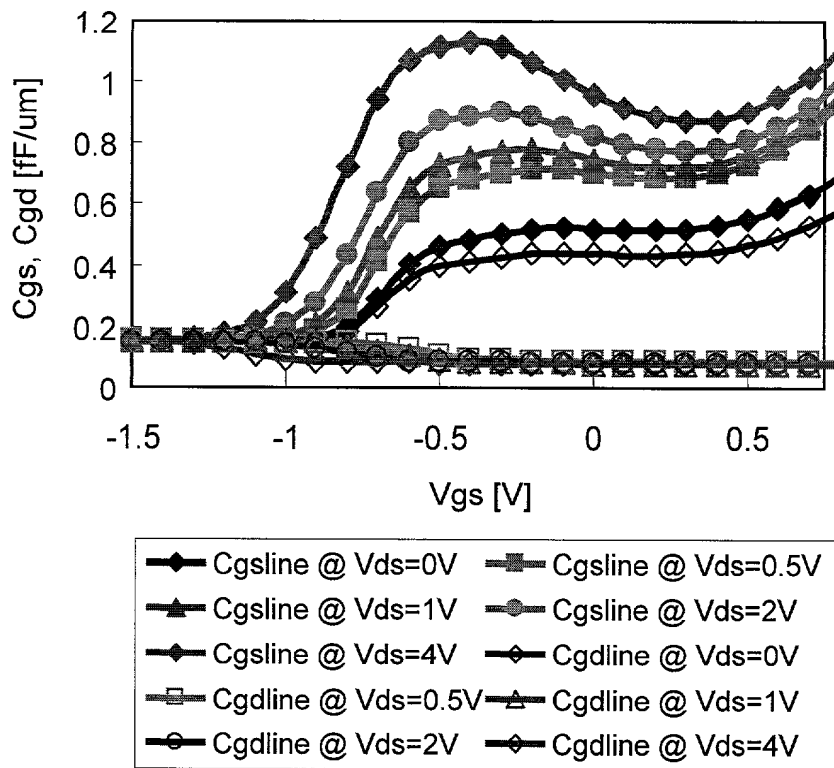


Figure 17

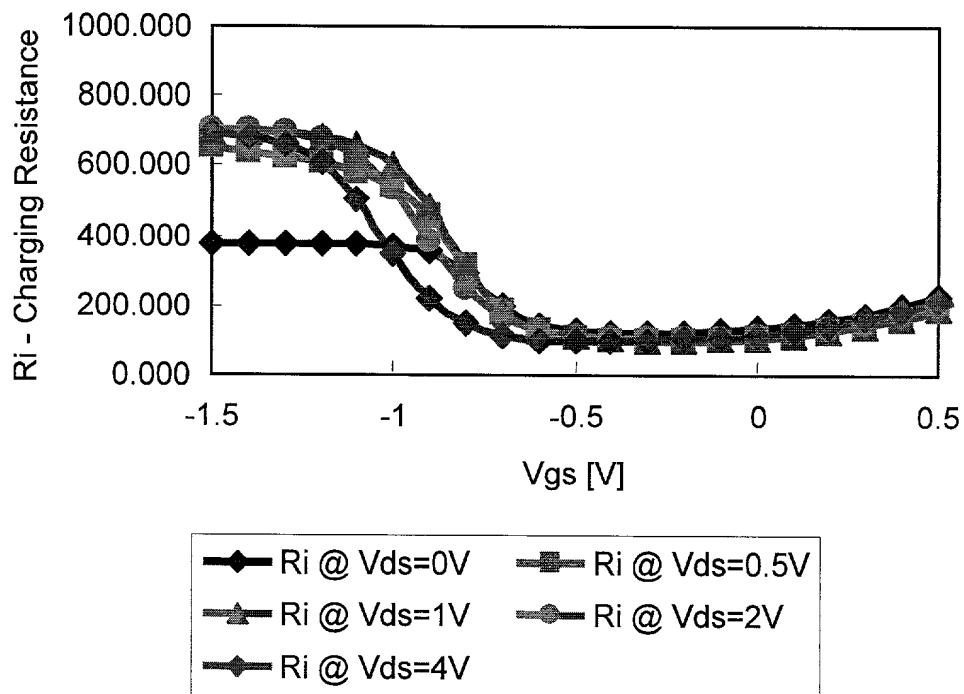


Figure 18

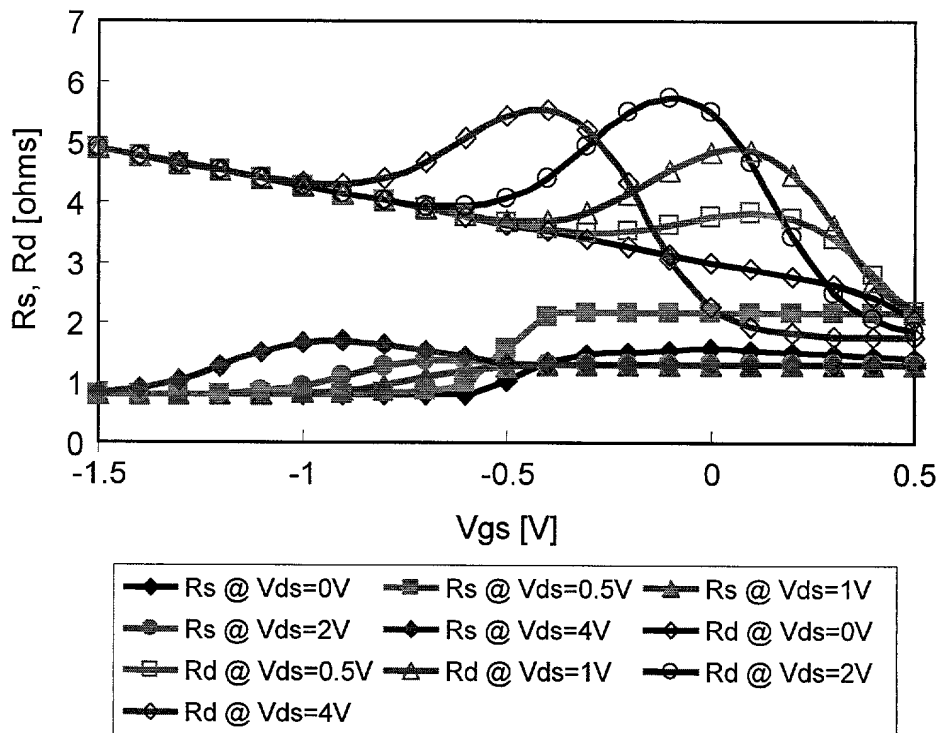


Figure 19

Measured vs Simulated Bias- Dependent Gain @ 23.5 GHz

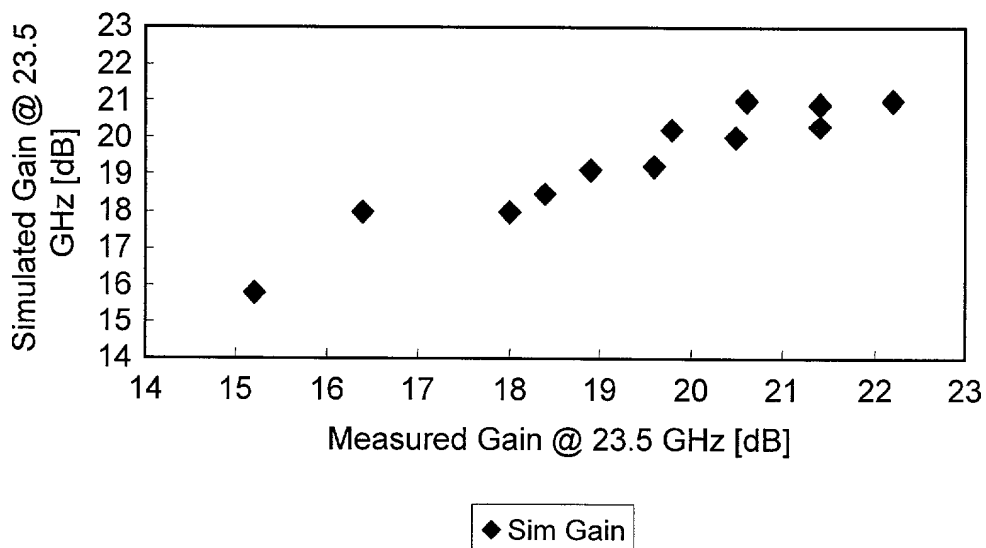


Figure 20

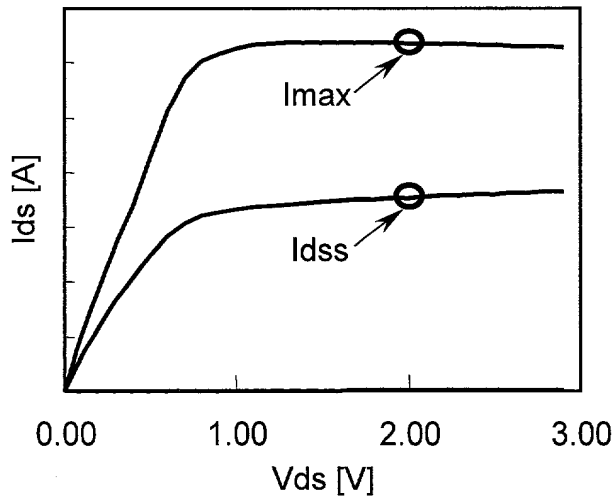


Figure 21A

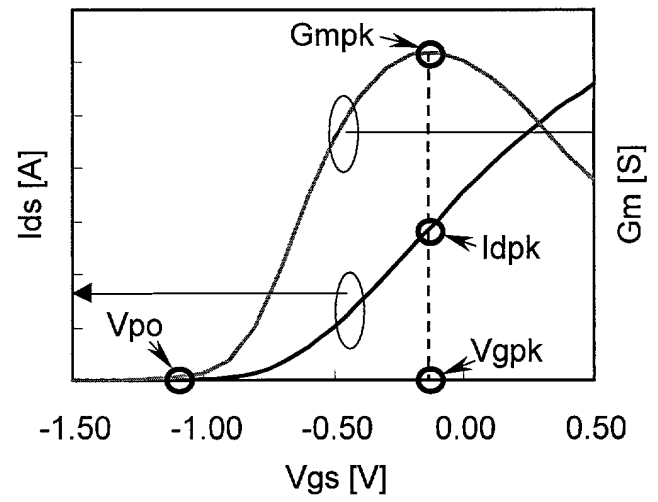


Figure 21B

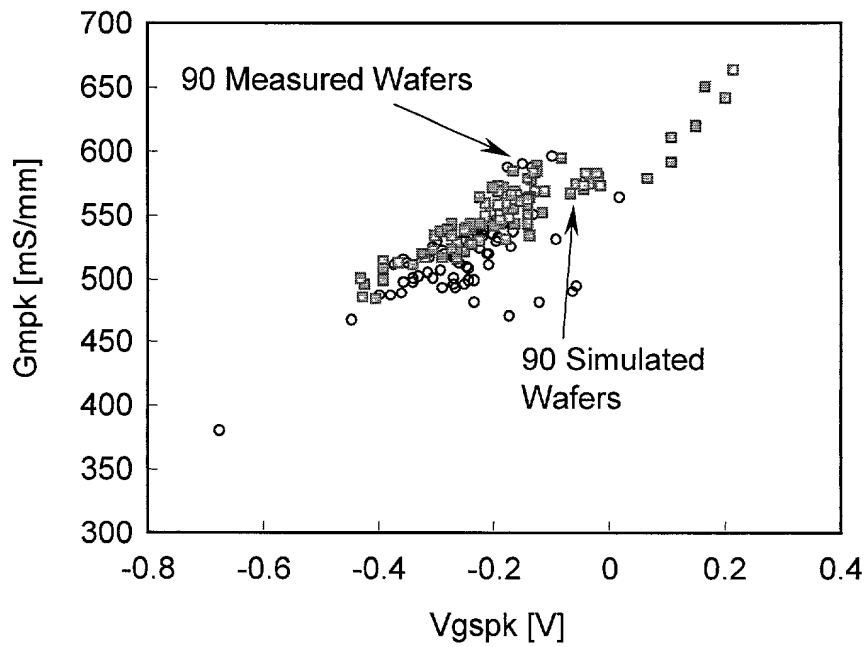


Figure 22

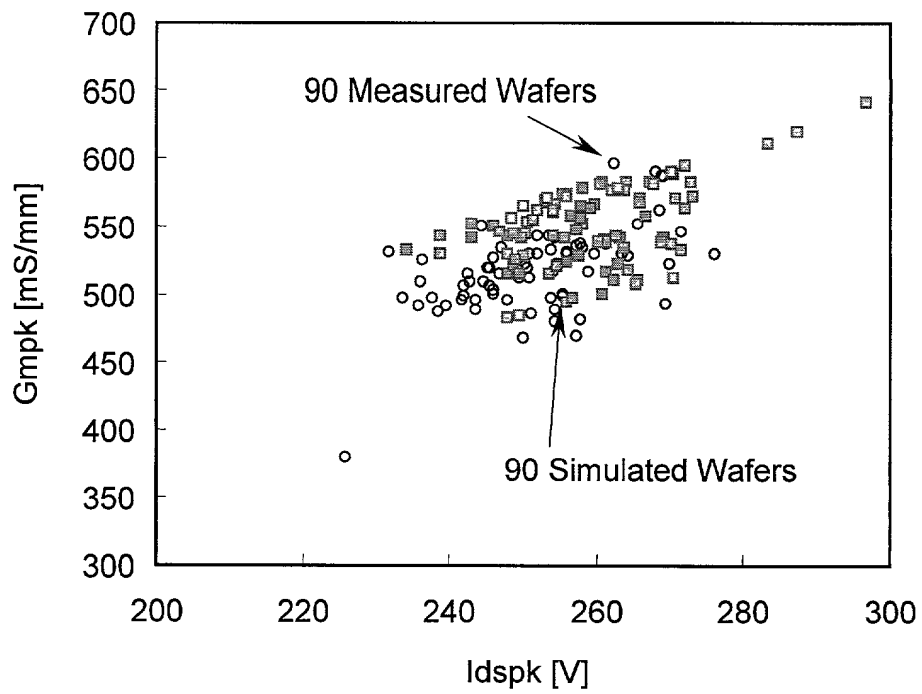


Figure 23

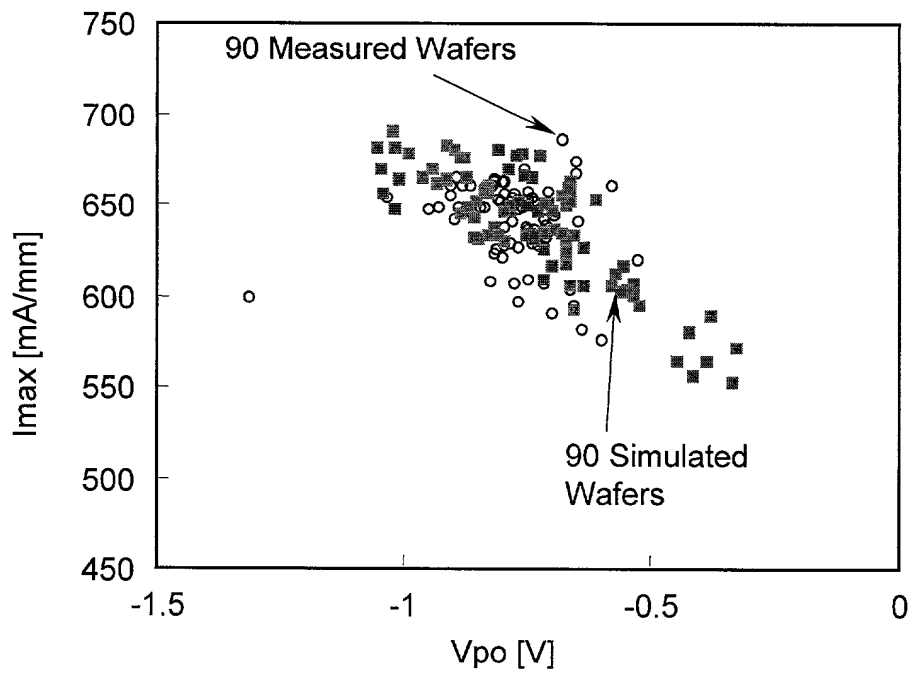


Figure 24

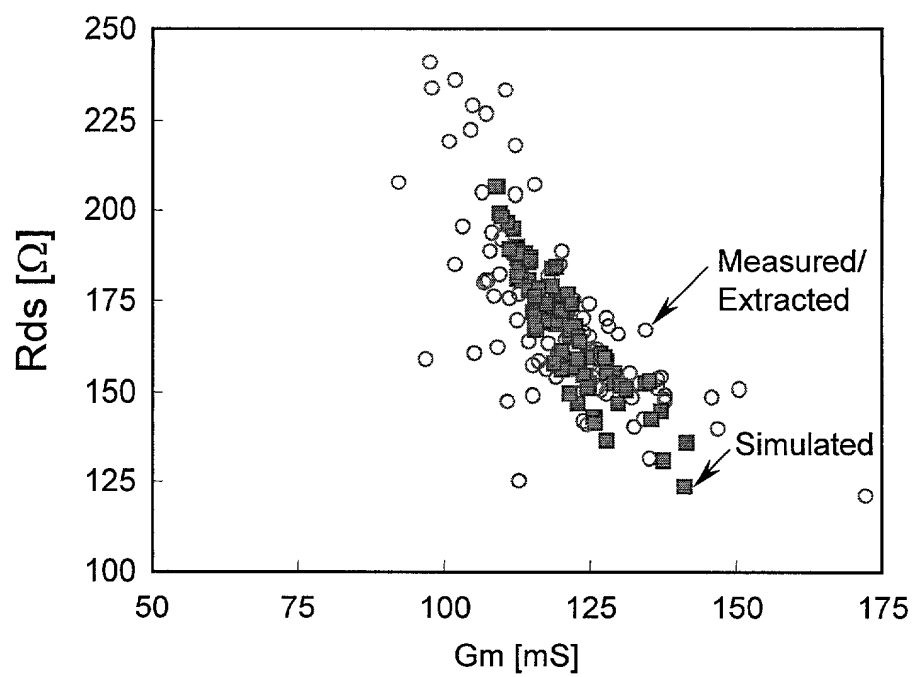


Figure 25

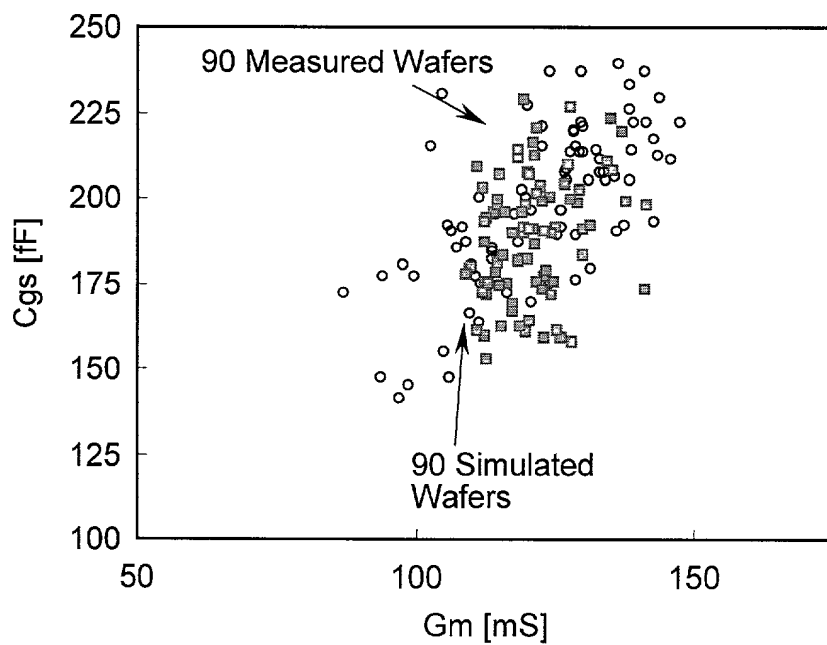


Figure 26

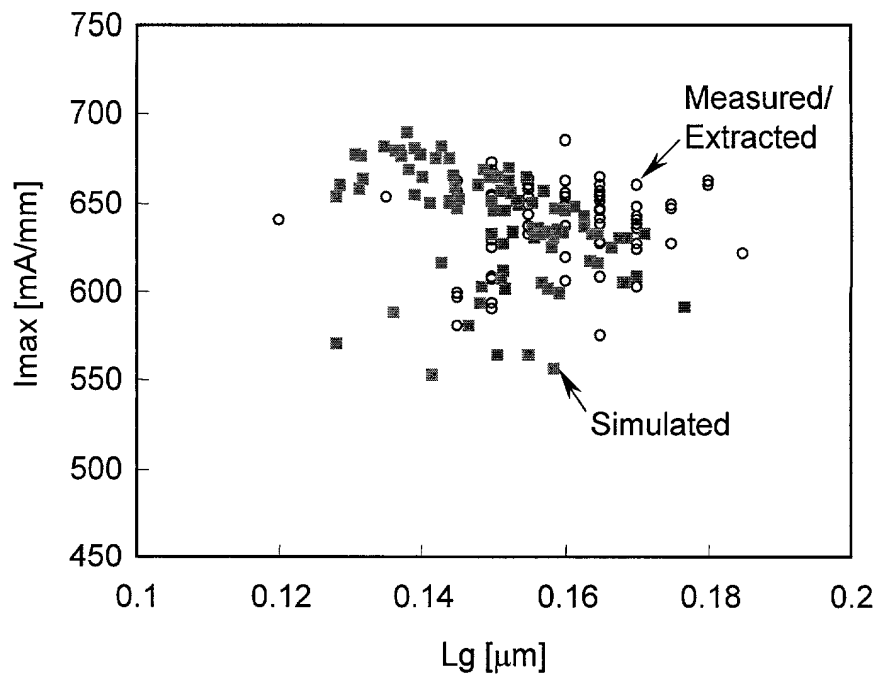


Figure 27

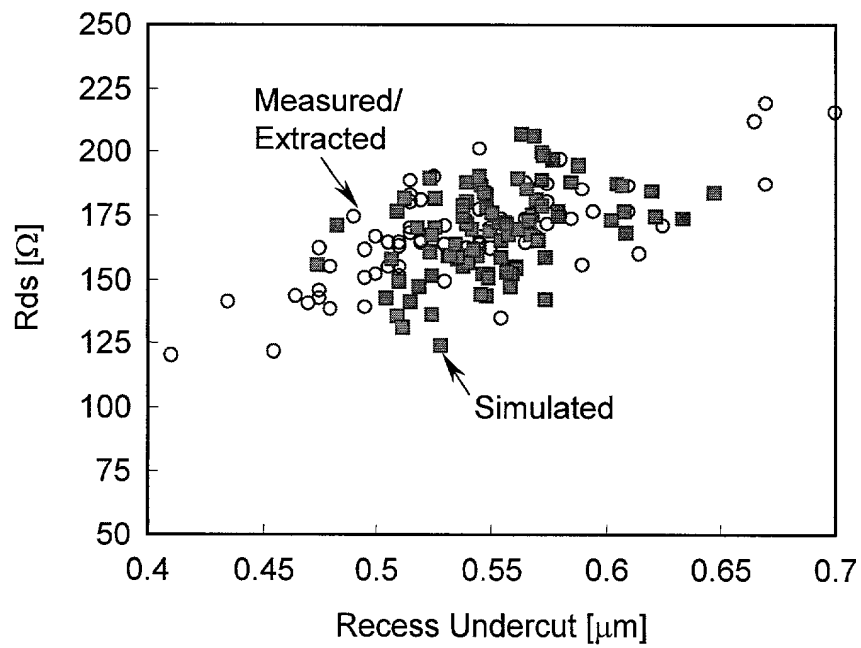


Figure 28